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An

Inaugural Dissertation

on

Cholera Morbus

by

George T. Yerby Passed March 24
1823
of Virginia.

1823.

Cholera Morbus.

Copious discharges of bilious matter upwards and downwards accompanied with painful gripings and spasms constitute the disease. according to Cullen Cholera morbus is acknowledged by all writers on the subject I believe to be a disease like Dysentary and Cholera infantum and almost endemic to warm climates. But although writers agree thus far; there is some difference of sentiment concerning the origin and seat of the disease. It was the opinion of the ancients, (Johnson says) even Hippocrates himself and after him Celsus and Saunders that it was owing to an increased secretion of bile and had its seat in the liver primarily.

Cullen and Thomas supported the same opinion (in part at least). Cullen in consequence of the disease being attended by a copious vomiting and purging of bile, concludes, that Cholera Morbus is owing to an increased secretion of bile and the copious effusion of that fluid into the alimentary canal. He also infers that the bile thus effused in large quantities is

at the same time of a much more acrid quality.
But here I have to state that these writers of equal respectability and of more modern date who contend as we shall presently show (and we think correctly too) that this disease is not to be attributed to an increased secretion of bilious matter (although it is evacuated copiously.) and also instead of the disease being primarily seated in the liver, the stomach is the part undoubtedly at which the diseased or morbid action first commences and consequently it is of gastric origin. In support of this I shall take the liberty of quoting the following passage from Johnsons tropical climates.
"Now it seems somewhat curious to me says that authour that if an increased secretion of bile were the cause of the disease, we should see nothing of it till" a few ~~days~~ "hours" after the effects become obvious!
Where is the increased secretion all the time?
Not in the stomach for it "discharges its contents and rejects what is swallowed" long before. It is

not in the intestines for the stools are at first "thin and watery" At length however "Gall bile" makes its appearance, and lo! it is accused of being the cause of all! The same writer moreover states in another passage in his treatise on this disease, that an increased secretion of bile" so far from being the cause of Cholera Morbus, is upon the whole, a favourable symptom, and that, in the very worst forms of the disease, it is entirely absent. Viz: "the bile, there is none secreted. These sentiments are undoubtedly strongly corroborated by the fact that the first discharges from the stomach and intestines are nothing more than the ordinary contents of these organs and are not at all biliaus. But after a certain length of time in consequence of the liver being stimulated to action by sympathy or consent of parts, bile is secreted in preternatural quantities and then the evacuations become bilious and not until then. Nor does that fluid says professor Caldwell appear to be characterized by any unusual acrimony in Cholera

(as has been asserted by Cullen and others) It is probably more bland than even in health; being discharged, as soon as secreted; and having, therefore no time to acquire acrid qualities, by the absorption of its aqueous portion.

Having attempted to prove that the sentiments concerning the origin and seat of the disease supported by Cullen and others, both before and after his day are incorrect, it seems to be incumbent upon us to point out what we believe to be the true pathology of Cholera Morbus, and this we shall do in a few words. There is no doubt but the liver is alternately the seat of the disease, but the question is, where is its primary seat, and in what part does it commence? This we have already stated, "we believe" and still contend, to be in the stomach, and this seems to be ~~undeniably~~ indisputably proven by the acknowledged fact "that Cholera Morbus is frequently brought on in consequence of eating cabbage and other indigestible ingesta and

also from the symptoms of the disease, for the stomach in every case is more or less affected and distressed in the commencement of an attack. Finally however owing to the close sympathy which exists between the stomach and liver. This latter organ becomes seriously involved and is excited into action, and then bile is secreted in vast quantities. But occasionally it happens that the liver is torpid throughout the disease, and there is no bile secreted and consequently none discharged. And bile in these cases can only be brought away by administering calomel to the patient, which stimulates the liver and thus promoting its secretion. These cases Mr. Johnson tells us are the most severe forms of the disease.

Cholera Morbus is closely allied to biliaus colic and its kindred affections and is biliaus fever turned in upon the bowels. In proof of this statement it may be stated, that, they make their appearance at this same season of the year - are produced by

[illegible] degree of pure sis poisoning in the system. Symptoms

the same causes and require the same remedies for their cure. It is true that now and then cholera may be traced to other causes, especially to irritating and indigestable matters taken into the stomach, but such cases of this kind are of a rare occurrence comparatively and indeed do not occur at all unless there is a considerable pll It commonly comes on, with severe pains and distension in the stomach - flatulence and severe griping pains in the bowels succeeded by copious discharges from the stomach and bowels. At first the matter evacuated is nothing more than the contents of the prima via, but after a short time the discharges by vomiting and purging are of a bilious matter and frequently of pure bile. There is also at this time heat, thirst hurried respiration and a frequent but weak and fluttering pulse. If the disease is not checked to the symptoms above described. There are cold extremities - great gastric distress and irritations. There is at the same time a correspondent depression

of strength – considerable anxiety, a hurried and short respiration – hiccups and sinking and irregularity of the pulse. And if relief is not afforded the patient is cut off in a short time.

The diagnosis is not very difficult. The only diseases with which it is at all liable to be confounded" are Colic – Dysentary and Diarrhoea. It may be distinguished from colic by the absence of constipation, and from Dysentary and Diarrhoea, by the discharges, in Cholera consisting, of pure bile and unmixed with blood or mucus. As regards the prognosis, there is much more difficulty, being extremely difficult to ascertain what will be the termination of the case, for recovery sometimes takes place under the most unfavourable circumstances and in other instances, death is the result where we have great reason to believe the patient is doing very well and is in the high road to recovery.

But when there is violent and obstinate vomiting – a great prostration of strength – much distention of the abdomen – intermitting pulse – cold extremities

also cold clammy sweats – constant hiccups – convulsions. Our opinion must be very unfavourable. What leads us to expect a favourable issue of the case, is, a gradual subsidence of the disturbed state of the alimentary canal – a rise of the pulse – refreshing and quiet sleep – a return of the temperature to the surface – absence or subsidence of convulsions &c.

The appearances generally met with upon post mortem examinations, are marks of disease and derangement in the digestive apparatus. There are frequently to be seen marks of inflammation in the stomach particularly and extending from there to the intestines.

The liver too is frequently found deranged. It is enlarged and distended in some instances from accumulations of bile &c. There is also a removal of several of the viscera from their proper situations; caused perhaps by the commotion given to them from vomiting in several cases.

The brain is also occasionally found not in a healthy state. Some times it is in a state of congestion and sometimes there are extravasations in the same organ.

3rd But occasionally it happens that although the theory may be probably correct yet the practice is not strictly deduced from it.

Deducing the practice directly from the theory we have delivered it seems to follow that the only indication is the complete removal of the primary irritation or cause of the disease situated in the stomach.

It is the advise of Cullen and Thoms to commence the treatment of Cholera, by administering diluents drinks and gentle evacuants so as to evacuate the contents of the stomach and also mucilaginous injections up the rectum in order to evacuate the redundant bile. But this we think is not always necessary, particularly in the country where for the most part a physician is not called until the patient has been considerably reduced and weakened by the copious discharges both by stool and vomiting. Here it appears to me that the indication is to check the discharges and not promote them by those means above mentioned. But it must be confessed that there are cases where it would be sound practice to commence the treatment by evacuating the stomach and this is to be done by the exhibition of warm

Diluent drinks, as before mentioned, such as warm water - warm chamomile tea - thin chicken water - flax seed tea barley water &c.

Emetics prescribed with the same intentions are occasionally useful, they clear the stomach of the offending cause and the system before relaxed; now reacts and the disease becomes more manageable. Practitioners have formerly led to adopt this practice from an incorrect view of the case. They supposed the disease arose from a vitiated state of the liver, but this we have attempted to prove is not the fact. The best emetic in this case, is Ipecacuanha, about ℈j should be given as a dose and its operation promoted by warm drinks. Ipecac not only evacuates the stomach, it does more, by its antispasmotic power - relaxes spasm.

If these means now detailed do not succeed in arresting the disease we should endeavour to calm irritation and relax spasmotic pain. To meet this indication several remedies may be employed, of which blood letting is the most important when judiciously

managed. But if it is indiscriminately use and carried to, too great an extent much mischief may result from it. The quantity of blood proper to be taken away can only be determined from the nature of the case. the age as well as the strength and constitution of the patient. Bear in mind however that the pulse are not to be our guide, for if there is only a moderate degree of vigour the lancet may be used safely for generally in these cases as the blood flows the system rise rise. But although blood letting may be resorted to in some cases yet generally we believe the lancet should be used cautiously so much so that in many cases it is recommended (even by the advocates for the remedy) to draw blood sparingly and during its flow attentively watch the pulse and the effects it produces, least the pulse should sink and any further loss of blood cause too much prostration of the system. Either from the system refusing to react or from almost all of the blood being driven in upon the large vessels or those which carry on the general circulation; in

this case if we were to bleed, it would be detracting blood from the superficial Vessels already partially emptied without doing any service. Upon the whole therefore we are induced to believe that unless the necessity for the lancet is very obvious, or at least, in all cases where the propriety of blood letting is at all doubtful, it would be ~~jeopardous~~ imprudent not to prescribe it. Previous however to resorting to Venesection (where we have determined upon its utility) it would be proper to recur to the use of the warm bath made more stimulating by the addition of some stimulating Vertible. Common salt and Cayenne pepper answer very well. By its wide diffused operation on the system it seldom fails to relieve pain and release spasm.

Rubefacients and embrocations are well calculated to contribute to the same end. Here is, remedies, that are calculated to allay irritation and check Vomiting are demanded - as lime water and milk, a tea spoon full of each - repeated at short intervals. Alkalies are also serviceable since they aid in the

same end and operate pretty much in the same way But in these cases our principal reliance should be placed on opium. Much has been said of the utility of this article at different times. It may be given early after the evacuations from the alimentary canal. In whatever stage however it is employed we shall derive great advantage from its use, if given in the form of an enema repeated every three or four hours as the urgency of the symptoms seems to demand. But as this mode of administering the medicine is frequently objected to by the patient and other circumstances may render it necessary to administer it by the mouth it should be preferred in a solid shape. Cooperating with and aiding opium in allaying the irritability of the stomach and relieving pain, warm fomentations to the region of the stomach are always beneficial and the best of these are bags of cloves; prepared by quilting powdered cloves in a flannel bag and this bag containing the cloves, is to be wrung out of hot whiskey

and water and applied as above. Also bitter herbs prepared, precisely in the same way; beets of wine sealed and the like are very serviceable and where clothes cannot be procured, will answer as a substitute very well. The acetate of lead is recommended by the professor of practice in this university, from analogy principally. He supposes it would prove very serviceable in this stage of the disease because he has witnessed good effects from its use in biliaus fevers where the stomach was exceedingly irritable.

Next I have to mention a remedy whose utility I believe does not depend or rest upon speculation or mere conjecture. It is Calomel. It should be prescribed in very small doses - from 1/4 gr. to 1/2 gr. and 3/4 of a grain. and this dose ought to be repeated frequently, say about every fifteen or twenty minutes.

Sulphuric Acid has been recommended by some of the West India writers. Of its utility not much I believe is known in this city.

All of the preceding remedies failing we should

must resort to blisters. These should be applied to the region of the stomach and if there be a manifest tendency in the system to sink the same should be applied to each extremity

Sinapisms of mustard applied to the soles of the feet and palms of the hands are sometimes of decided utility. Nitric acid is recommended to be used for the same purpose that cantharides are, viz as a blister to support the system and a counter irritant. The acid should be diluted. To one part of acid add two of water. This is to be rubbed on the surface over the region of the stomach or applied by means of a tow dipped into the acid, to the same part and continued until it burns. The acid should then be neutralized by a solution of Carbonate of potash, and then we have a blister produced which is to be treated in the same way as one from cantharides should be.

At this time it is, diffusible stimulants are demanded. such as hot brandy toddy. mint julips. oil of turpentine. the Volatile alkali &c.

As I have detailed. such is the treatment recommended by the most judicious practitioners and it seems to be that which best accords with the pathology of the disease and if duly persevered in and temely administered will be believe generally succeed, in curing Cholera Morbus.

But occasionally we have to encounter some violent cases which will baffle our skill and even set at naught our exertions. When such cases occur we should call into requisition all the remedies in our power. Some cases of Cholera Morbus are so rapid in their progress and so severe that they terminate in three or four hours. Such cases however are very malignant appearing only it is said during the prevalence of Yellow fever. In ordinary times the disease terminates in about twenty four hours.

Doct Chapman when lecturing on this disease related a case that occured to him which arose from eating water melons at noon and all that medicine could do, was unable to prevent a fatal issue before night.

As Cholera Morbus is exceedingly apt to return it most seems proper to consider those means best calculated to prevent a subsequent attack and with this view all exciting causes should be carefully avoided. Such as exposure to the hot sun and night air, also excess in eating and drinking. Likewise improper articles of food and excessive exercise - paroxysms of passions of the mind and what is most important, avoid cold feet. Neither should we neglect paying a proper and due attention to the bowels; they should always be kept in a solubble state, by the occasional administration (if required) of Castor oil or calcined Magnesia or Rhubarb or what is better is a combination of the two last viz: Magnesia and Rhubarb.

Tone should also be imparted to the digestive apparatus and to do that bitters are highly useful and of these the Quassia and Columbo root are said to answer best - given in the form of tea or an infusion and what greatly adds to their efficacy

is Elixir Vitriol. Flannel should be worn next the skin. This is highly spoken of by most writers on this subject. Its modus operandi is quite intelligable. When the disease has a very strong disposition to return or when it forms ulcers as an sequelae (which it sometimes does) it is said an alterative course of Mercury is certainly the most efficacious mode of treating it although it has no specific or direct operation in ~~[illegible]~~ destroying or curing the disease, Yet it produces a revolution in the system and its action supplants that of the disease